

# NUTRITION

THE BASIS OF THE TREATMENT

OF

DISEASE :

THE INTRODUCTORY ADDRESS

AT THE OPENING OF THE MEDICAL SESSION AT

UNIVERSITY COLLEGE, LONDON, OCTOBER 1, 1867.

BY

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## A D D R E S S.

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GENTLEMEN—

Many of you are here to-day for the purpose of commencing a grand work. You are about to embark your energies and activity in an undertaking whose magnitude and extent you cannot as yet adequately appreciate. My first and pleasing duty is to welcome you among us, and to assure you, on the part of the professors and teachers of this College, of their cordial sympathy with you in the enterprise in which you are engaged.

Permit me, in the next place, to congratulate you on having made Medicine your choice as a profession. The practice of medicine is not a path of roses; its study is difficult; its rewards, in a pecuniary sense, not high; yet it is impossible to speak of it without enthusiasm. The nobleness of its objects, the elevation of mind consequent on the

perusal and unfathoming of so many of nature's mysteries, the constant and exciting warfare waged between the physician on the one hand and death on the other—all these circumstances contribute to invest medicine with an attraction and interest which has never failed, and never will fail, to draw within its portals human intellect and human energies of the very highest order.

By the public at large medicine is not too highly appreciated ; indeed, by those outside of the profession the nature of our work cannot be even understood. The multitude only judges by the result ; we occasionally get credit when such credit is undeserved ; but it more often happens that our real successes and triumphs are of such a kind that they can be understood and appreciated only by ourselves. Cynics and unbelievers living in the outer world not unfrequently find material for ridicule in the failures and alleged uncertainty of our art. We cannot always cure ; our efforts, however anxiously and well-directed, frequently fail in averting the fatal issue. Why this is so, and why it must be so to the end of time, can only be comprehended by those who have taken the pains to study disease. Medicine can only be criticised by those who have done battle with us in our encounter with the dread enemy of the human race.

The science of medicine, as it now stands, is the product of the accumulated observations and experience of many generations. The labours of many of the greatest minds the world has ever seen have been expended in the attainment of that vast fund of knowledge which this science now embraces. The value of this great legacy of the past can only be rightly apprehended by imagining what would be the effect of destroying, at one fell swoop, all the records we possess, and all the living representatives of medicine. To reconstruct the edifice would be an enormous undertaking ; civilisation and human progress would receive a check the magnitude of which it would be difficult to exaggerate.

Medicine is a life-long study. It demands patience, perseverance, and unwearyed attention to detail, and a faculty for sound generalisation. It embraces a range of subjects extremely wide. Natural philosophy and chemistry have first to be studied ; next come anatomy and physiology—a sound knowledge of the structure of the body, and the actions of the body, involves the expenditure of much labour, and the mastery of many details. The use of the test-tube and of the microscope are studies in themselves. All these are, however, preliminaries only to what follows : the observation and study of the actual phenomena of disease, the effects of disease

on the living frame, and of the changes produced by it in the various tissues of the human body. To learn how to count the pulse, to use the stethoscope, the thermometer, and other ingenious instruments employed in the investigation of disease, to master the art of recording in intelligent terms the physical aspect and condition of the patient, to learn the names by which the various diseases are designated ; on these labours much time is also necessarily expended. To recognise and identify disease is the next object. This—the diagnosis, as it is termed—is certainly the most difficult part of medical study, requiring a consummate knowledge of medicine in the widest sense of the term, and calling into exercise all the subtle reasoning and other intellectual powers we have at our command.

The time at our disposal to-day might be occupied, not unprofitably, in pointing out how these several studies are best pursued ; I prefer, however, to take this opportunity of making a few introductory remarks on a subject interesting to us all—the subject, in fact, which is the end and object of all medical study—the Treatment of Disease.

The elements of medicine are, we will suppose, mastered ; we possess an acquaintance with disease, are able to recognise it, tabulate it, describe it. The question now arises—how shall we treat it ?

Is there, it may be asked, any great law, any simple expression or proposition which shall so far embody the end and aim of medical treatment as to form a safe basis for practice? Is the treatment of disease to be conducted on a rational, simple, and well-understood method? or is it to consist in the wild empirical practice of administering particular remedies for the relief or removal of particular diseases?

A firm basis for the rational and scientific practice of medicine is to be deduced from the study of the phenomena and laws of life—life, not simply as we meet with it in the human body, where indeed it presents itself in a highly complicated form, hedged about and surrounded with so many peculiar and exceptional conditions; but life as it is manifested in creation as a whole: life in the plant, in the zoophyte, in the lower as well as in the higher tribes of animals. And, however little we may be able to know of the nature and essence of life itself, thus much physiology unceasingly tells us, that continuance of life is dependent on the constant fulfilment of certain well-defined conditions. Nature is inexorable in her demands; food, light, air, these are indispensable to the maintenance of life. Failing these, disease and death quickly take possession of the fabric. Chemistry steps in, and relentlessly

breaks up and distributes to their pristine elements those admirably and elaborately contrived organisms that people the world. Chemistry, which is for a time the slave of the body, silently doing its work, and obeying its behests, becomes finally the master. While the plant or the animal is enjoying the exuberance of life, the chemical and other changes are only such as result in fresh elaboration, new beauty ; but disease or accident may at any time precipitate that end which always comes sooner or later. Chemistry still operates, though life has departed, and forthwith busies itself with the dismemberment of the withered and lifeless remains.

The vital principle is our great ally in the struggle which we assist the body in maintaining against the inroads of destruction ; its power is great, its endurance almost unbounded. What it is, we know not, nor can we point out the part of the body in which it is specially located ; but so long as it retains its connection with the body—however slightly—so long life is possible, recovery may be hoped for.

We cannot imitate those wonderful processes of formation and growth which take place in the body, however closely we may be able to inspect them. It is not within our power to manufacture artificially a single drop of blood, however well acquainted we may be with the colour, the specific gravity, the

physical composition, and peculiarities of the life-giving fluid. Those minute exquisitely organised structures known as the blood corpuscles, who shall shape them or produce them ?

The formative power of the body is, in fact, its life ; creation is beyond our sphere. But this formative power, this incessant production, gives rise to an equally incessant demand for new material. Food, in other words, is required to sustain the vital actions of the body, failing which those vital actions must cease, and life itself become extinct.

Here then begins the work of the physician. What is disease ? Is it a something added to the body, a material thing, deranging its fine mechanism, a material thing which we can examine, and weigh and analyse ? or is disease caused by an absence of some constituent of the body necessary to its health, tangible, ponderable, and evident to the senses ? Very frequently it is neither the one nor the other. An injury, by disturbing the proper mechanical relation of different parts of the body, or by causing the loss of a member, in a multitude of ways, in fact, may give rise directly or indirectly to disease. But of the great majority of cases, it may be stated that the presence of disease is intimately connected with derangement of those processes by which the new material taken into the body is converted and appro-

priated to its own uses and purposes, or to deficient supply of the very material itself. The whole of the body, the muscles, skin, internal viscera, even the bones, are in a state of perpetual change. The individual, as we see him to-day, is externally, perhaps, not materially changed, but he has not, nevertheless, actually the same body which he possessed a few years ago.

It is unquestionable that the most important of the vital processes is that which is concerned in providing for that incessant demand created by the perpetual waste and change of the tissues of the body. Necessary it is that the body be sedulously guarded from influences of a deleterious nature, from mechanical injury, from noxious or pestilential miasmata, from the thousand and one enemies to whose attacks the human frame is rendered peculiarly susceptible by its high organisation and delicate structure, but, unless the aliment with which it is supplied be good, and fit, and sufficient, disease must sooner or later result.

We all admit the necessity for food. Neither is there any great novelty in the proposition that many diseases owe their origin to absence of food, or to the alimentary matters given being defective in quantity or quality. But do we adequately recognise it as a fundamental principle in the treatment

of disease that food is the most powerful of remedies?

Is not this the principle of which we are in search, which shall serve us, frequently much, always in some degree under any and every circumstance?

The object of treatment is to avert death. Life, the opposite of death, can only be maintained by incessant administration of nourishment. Let us not forget that our principal object is not so much to drive the disease out of the body—in itself doubtless a very laudable object—as to save the body, at all costs, from death. The conduct of the medical enthusiast, who, as the story goes, exclaimed, as he witnessed at the same moment the departure of the disease and the exit of the unfortunate patient to the other world, that he died cured, may serve for warning, hardly for an example.

No. In the battle we wage with disease, it is chiefly a question of supply. The prescription may be otherwise faultless, its different ingredients balanced to a nicety, but the life itself must be supported and sustained, and this cannot be done without food.

Let me not be misunderstood. The nutrition treatment, as it may be termed, is not everything in medicine. Far otherwise. We have at our command numberless resources of other kinds. That

grand art and science, built up by successive generations of ingenious men, which we call surgery, how much does humanity owe to it ! The accomplished surgeon, how dexterous a workman is he, and how frequently do we see the crushed and mangled body restored to life ; how often the long-tormented and suffering patient relieved at once, as by magic, at a touch of his skilful hand ! But however great may be the dexterity exercised, however precise the adjustment of the broken fragments of the crushed limb, what will it avail unless the strength and vitality of the patient be sustained ? The cordage of the ship must be kept in order, but that sunken rock towards which the vessel is rapidly drifting, and which threatens the whole fabric with destruction—we must at all costs keep clear of that.

In the obstetric department of medicine, again, manipulative skill and knowledge of a special kind are required, and are often happily of great service in the saving of life ; but the effects of some of the most fatal and dangerous of the diseases connected directly or indirectly with parturition can only be obviated by attention to this principle. The life ebbing away from loss of blood, or from the depressing influence of that animal poison sometimes engendered under such circumstances, can only be detained

within the bodily framework by nourishment freely and frequently administered.

And I should be exceedingly sorry to be considered as undervaluing the assistance we derive from those various medicinal substances which are termed drugs in the treatment of disease. Many of them are quite invaluable. We are indebted to them for the relief of pain, for the alleviation of suffering, sometimes for the absolute cure of disease. The time has been when the faith in drugs was implicit and unlimited. To this a scepticism on the subject succeeded, the natural consequence of advanced knowledge. The tendency among medical observers and enquirers has subsequently been indeed to go to the other extreme. But the further progress of medical enquiry bids fair, not indeed to re-establish the old faith, according to which the prescription was valuable in proportion to its length and complexity, and to the number of its component parts, but to give an increased importance to this department of the healing art, to make us more accurately and more advantageously acquainted with the action of medicines in the system, and, indeed, to provide us with new remedies.

What again shall we say of the influence of fresh air, of climate, exercise, baths, in the treatment of disease? Are these to go for nothing? They are,

when properly used, powerful agencies, both in the preservation and in the restoration of health. Most potent, but still subsidiary means ; and be it remarked that their influence is so beneficial because they promote healthy nutrition. They assist the body in getting rid of the old, and thereby create a demand for new material. The changes in the tissues, which would otherwise proceed slowly, languidly, and, the chances are, unhealthily, they hasten and promote. The waste is increased, the demand is increased in a like ratio : appetite, vigour, and health successively return.

With some few exceptions, death is always preceded by exhaustion. The natural forces of the body become weakened in some way or other ; another step downwards, and the body ceases to live. Its mechanism is sometimes so disturbed or disarranged that resuscitation is in no way possible ; but the mechanism being intact, the restorative power of food is great to an almost incredible extent. Nature herself frequently suggests the remedy, calls loudly for food, and will not be denied. The indication is then plain enough. But when exhaustion is great, appetite gone, consciousness itself perhaps well nigh extinct, it is under these circumstances that a knowledge of the extraordinary remedial action of nourishment is of vital importance. To place within the alimentary tube something which it may easily

take up, and which the body may, with what little power is still left to it, convert into new force—to do this at the right moment, and in the right way, is often an exercise of consummate skill and ability. The body is enabled thus to retain its hold on life. The deadly coldness gives place to genial warmth, the flickering pulse becomes steady, the light anew sparkles in the eye ; for a time, at all events, the bitterness of death has passed.

These are the considerations which really lead us to attach so much importance in the treatment of disease to the services of the well-trained nurse. Of late years a very great advance has been made in regard to the efficiency of medical treatment, owing much to the skilled nursing which is now becoming more and more valued as an essential part of the medical treatment the patient is to receive. It is in vain that food and medicines are ordered, and a well-arranged system of treatment devised, unless provision be made for their regular administration. The importance attached to good nursing by those who lead professional opinion is to be regarded as an indication of the growing trust on their part in the curative influence and power of food ; for although the functions of the nurse are by no means limited to the administration of food, it is very certain that in all critical cases careful detailed attention in this

particular is that which is most needed, and which constitutes a chief part of the duties with which she is entrusted.

It is not, however, simply in obviating the effects of acute disease that the remedial power of good nutrition possesses such forcible claims on our attention. Disease has a beginning. That prevention is better than cure is a maxim old as the hills. A very large number of deaths are due to diseases which originate in defective nutrition. Consumption, in its many forms and disguises, appears to be essentially connected with want of food. That there are other influences also concerned in the production of this class of diseases, it would not, perhaps, be altogether correct to deny, but it is very certain that the nutrition method of treatment has, under otherwise ordinary favourable circumstances, a most marvellous power in arresting its onward progress, and, unless the disease has absolutely destroyed some considerable portion of a vital organ, in curing this fell disease. That the same plan of treatment applied at an earlier period would prevent its occurrence altogether is to be expected. During certain periods in the life of the individual the growth is excessively rapid; in youth and childhood the framework of the body is incessantly increasing in size; not only so, but the changes in the tissues proceed with a

vehemence and activity which are no longer witnessed when maturity has been reached. The remark might seem almost superfluous, that, to maintain this growth, food in large quantities will be required. It is not surprising to find that the most disastrous results follow whenever this fundamental principle is neglected. It is impossible to estimate, with any degree of accuracy, the number of deaths really due in this way to defective nutrition, for a vast number of them do not appear as such in the Registrar-General's Reports ; the body does not always and at once succumb, but it is weakened, and its power of resistance diminished, and it falls an easy prey to one or other of the malign influences perpetually on the watch to attack it.

The public are not as yet sufficiently alive to the importance of preventive medicine. Parents have their own ideas on the management and bringing up of children, but it requires no great gift of prophecy to predict that in the future one great function of our profession will be more systematically and continuously called into exercise, that which consists in regulating the supplies of nutritive material during these more active periods in the growth of the human fabric. One effect will then be observed, an enormous diminution in the mortality from a class of diseases which at present, and in this country,

carries off in early childhood, or in the flower of their youth, so large a proportion of the community.

There would seem, indeed, to be hardly any limit to the beneficial influence capable of being exerted on the human body by regulating, as experience or observation shall indicate, the character of the nutrition process. During childhood the growth is rapid, and the plasticity of the tissues is consequently greater than in adult life. Under these circumstances, healthy tissues can, therefore, be manufactured with greater rapidity. The very remarkable healing power of a well-regulated and ample diet is then evinced in the most demonstrative manner. We may argue from these facts that organic changes in the tissues may be effected also, but more slowly, at a latter period of life. We may be satisfied that we have in this regulation of nutrition an instrument of great power, and that so long as life lasts we may hope by its means to effect something of a curative character, even in the worst cases. Physical diagnosis has of late years attained great exactness, and indeed the almost perfect acquaintance it has given us in many cases with the actual condition of the heart, the lungs, the liver, and other viscera, has, I believe, in not a few instances had a tendency to invest some diseases or certain physical alterations with terrors which do not belong to them. In the

future, however, this more perfect acquaintance with the state of internal organs will be turned to good account, and the progress of those curative changes we may hope to be able to effect in them will be more readily registered and appreciated.

Sanitary science, which is chiefly occupied in preserving the body from the effects of noxious influences attacking it from without, has achieved great things in these latter years, and it has yet work to do. But, as it appears to me, a yet wider field for the labours of well-trained, well-educated, and patient observers of nature and nature's processes presents itself in the regulation and adaptation of food with the object of effecting radical and curative changes in the diseased tissues of the body; and it is this reason which has induced me to claim for the consideration of this subject so large a share of your attention. Medicine does not end here. This is but the beginning. This is the basis and the foundation only of the structure you are to build and elaborate, but it is still the basis, and no other is possible for a rational system of medicine.

Gentlemen, in the future the treatment of disease will occupy much of your attention; but there is a matter you will find it yet more difficult to deal with—the treatment and management of yourselves

Let me speak to you now as individuals. You wish for success. Success is only possible by observance of certain conditions. Possessed of average strength and energy and ability, you will be able, by judicious management, to distance others superior to you in natural endowments, but incapable of applying them to advantage. The whole secret lies indeed in the generalship which you exercise in this particular. Lay down a good plan of work, and allow nothing to turn you from it. Let the work you do be of the best kind ; let it be done heartily, and concentrate upon it for the time all your attention. Spasmodic and fitful efforts are exhaustive in their effects, and leave no enduring traces behind them ; regular and well-sustained work alone lives. The capability for work is a talent you should treasure and preserve. By exercising it, you will strengthen and invigorate it. It is the capital you are possessed of which will yield you, it may be hoped, golden results in the future—fame, reputation, the respect and esteem of your fellow-men, the power and satisfaction of doing good ; last, but not least, the means of securing an honourable livelihood.

It is a law of nature, an integral part of the physical constitution of the human body, that no function or power which it possesses can be greatly or incessantly exercised except at the expense of

premature diminution or even extinction of that power. The balance must be preserved ; each faculty must be exercised. The work in which you are engaged requires a clear head ; it demands a high cultivation and development of the intellectual faculties. But this must not be done at the expense of the body generally. And in order that you may be able without ultimate detriment to secure this end, the body as a whole must be maintained in a sound state of health. This can only be done by taking daily vigorous exercise. A certain portion of each day should be set aside for the cultivation of the body in order that the remainder may be advantageously devoted to the cultivation of the mind. Let it, however, be distinctly understood that this physical training is not to be carried to excess ; it is a necessary but still a subordinate part of your daily employment. Regular mental effort duly mingled with bodily exercise renders work an ever-increasing pleasure. Health of the body imparts a healthy tone and firmness and soundness to the mind.

Begin your labours at once. Be assured that you cannot trifle with your work or postpone it. The moments lost cannot be regained ; the task of to-day must not be left till to-morrow. How often do we hear, when too late, self-reproach, vain regrets,

uttered over mis-spent time, wasted energies, opportunities irrecoverably lost, utter failure and discomfiture, resulting from want of a little firmness, a little resolution and self-denial, at the commencement. Habits are easily acquired. See to it that you acquire good ones.

The bow must not be always bent. Rest and recreation should have their place in the programme of life. But beware of pleasure, or rather beware of the pursuit of pleasure, and studiously avoid the society of those who abandon themselves to it, otherwise you will be, sooner or later, drawn within those fatal meshes from which so few escape without bearing upon them permanent and ineffaceable injuries of both body and mind. Your whole future will take its tone—its brightness or its darkness, as the case may be—from your decision or indecision in this particular.

Firmly resolve, then, to do your duty, to maintain your self-respect, your self-reliance, your self-control. These are the pass-words which shall gain for you access to those Gardens of the Hesperides and possession of the coveted golden fruit. With these qualities you may achieve greatness, distinction, what you will ; without them, life must prove a failure or a disappointment.



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